Grade 3-5 Mathematics Progress Monitoring

Standard 1 Number Sense
Counting and quantity

Demonstrates awareness of the presence of objects
Shows displeasure when a desirable object is removed

Shows pleasure when a desirable object is received

Gives an object when asked.

Identifies more
Demonstrates awareness of the presence of objects

Indicates desire for "more"

Identifies which amount is "more" (e.g. visually, tactilely, or auditorally)

Gives more when asked

Identifies which collection is "more" (e.g. visually, tactilely, or auditorally)

Uses numbers to compare
Identifies more

Uses whole numbers up to 5 to describe objects and experiences

Touches or points to each object in a sequence only once

Identifies when objects are the same number, even if arrangement is changed

Identifies when a number of objects is "less" (e.g. visually, tactilely, or auditorally)

Names and orders quantities
Uses numbers to compare

Identifies the next number in a series of numbers

Identifies "first" and "last"

Gives "the rest" when asked

Uses drawings to represent quantity and numbers

Counts a number of objects up to 10.

Describes relationships between numbers and quantity
Names and orders quantities

Counts a number of objects up to 20.

Recognizes, represents, and names a number of objects up to 10.

Uses concepts of "most" and "least"

Uses concepts of "all" "none" "some"

Orders a number of objects up to 10.

Identifies numbers and quantity to 100
Describes relationships between numbers and quantity

Counts to 100

Recognizes whole numbers to 100

Counts and groups objects in ones and tens

Identifies numbers up to 100 in various combinations of ones and tens

Names the number that is one more than any number less than 100.

Names the number that is one less than any number less than 100.

Compares whole numbers up to 10 and arranges them in numerical order.

Writes numbers up to 100

Identifies numbers and quantity to 1000
Identifies numbers and quantity to 100

Counts whole numbers to 1,000.

Reads and writes whole numbers to one thousand.

Uses words, models, and expanded form to represent numbers up to 1,000.

Identifies numbers up to 1,000 in various combinations of hundreds, tens, and ones.

Compares numbers on a number line

Identifies numbers and quantity to 1000

Uses number lines to describe number relationships.

Uses numbers in between whole numbers.

Plots and labels whole numbers on a number line up to 10.

Illustrates that if 0 and 1 are located on a line, any other number can be depicted as a position on the line.

Identifies "0" as a value in some situations and as a label of some point on a scale in other situations.

Plots and labels whole numbers on a number line up to 100.

Estimates positions on a number line.

Compares parts and whole

Compares numbers on a number line

Communicates when a snack is split in "half"

Divides sets of 10 or fewer objects into equal groups.

Divides shapes into equal parts.

Recognizes when a shape is divided into congruent (matching) parts.

Recognizes fractions as parts of a whole or parts of a group (up to 12 parts).

Includes all fractional parts to equal the whole and represents this with the number one.

Renames and rewrites whole numbers as fractions.

Names and writes mixed numbers using objects or pictures.

Names and writes mixed numbers as improper fractions using objects or pictures.

Writes tenths and hundredths in decimal and fraction notations.

Standard 1: Number Sense
Computation

Manipulates objects for a purpose

Pulls or breaks apart food.

Lines up objects

Attends to a new object in a group of objects

Matches objects and sets

Manipulates objects for a purpose

Puts pairs together

Matches sets of objects one-to-one

Uses the term "same"

Makes a set of objects smaller or larger

Matches objects and sets

Makes a collection of items larger by adding items when asked.

Makes collections of items smaller by taking items away when asked.

Identifies "one more" "one less"

Describes addition and subtractions situations for numbers less than 3

Follows models of addition or subtraction situations

Makes a set of objects smaller or larger

Creates a collection equal to objects in a collection already constructed.

Describes addition situations for numbers less than 5.

Describes subtraction situations for numbers less than 5.

Uses the term "half"

Uses the term "whole" when combining a whole quantity of something

Describes the application of addition and subtraction situations

Follows models of addition or subtraction situations

Finds the number that is one more than any whole number up to 10

Finds the number that is one less than any whole number up to 10

Compares sets up to 10 objects and determines if they are equal

Models addition/subtraction by joining sets of objects (for any two sets with fewer than 10 objects when joined)

Divides sets of 10 or fewer objects into equal groups.

Makes precise calculations and checks validity of results in context of problem

Demonstrates fluency with addition and subtraction facts

Describes the application of addition and subtraction situations

Shows the meaning of addition (putting together, increasing) using objects

Counts forward from a number to find out total number in group.

Adds numbers with sum less than 10.

Uses zero in addition problems

Demonstrates mastery of addition facts for totals up to 10

Demonstrates mastery of addition facts for totals from 11 - 20.

Shows the meaning of subtraction (taking away, comparing, finding the difference) using objects.

Demonstrates mastery of subtraction facts with totals up to 10

Demonstrates mastery of subtraction facts with totals from 11 - 20

Uses zero in subtraction problems

Uses symbols "+" and "-"

Uses the symbol "="

Uses the inverse relationship between addition and subtraction to solve problems

Adds three numbers with sum less than 10.

Writes and solves number sentences from problem situations involving addition and subtraction

Adds and subtracts up to 100

Demonstrates fluency with addition and subtraction facts

Models the addition of numbers less than 100 with objects and pictures.

Uses mental arithmetic to add 0, 1, 2, 3, 4, 5, or 10 with numbers less than 100.

Uses mental arithmetic to add with numbers less than 100.

Adds two whole numbers less than 100 without regrouping.

Adds two whole numbers less than 100 with regrouping.

Subtracts two whole numbers less than 100 without regrouping.

Subtracts 2-digit number from a 2-digit number with no regrouping.

Subtracts two 2-digit numbers regrouping ones.

Standard 2: Geometry and Measurement

Time

Anticipates a routine

Cooperates with routines

Anticipates an event in a sequence during daily activities

Prepares for something anticipated

Associates familiar events with concrete objects (e.g. blanket for bedtime)

Follows along with a simple routine

Uses vocabulary to identify events in a routine

Anticipates a routine

Responds to now, next, done

Responds to "one more..." (time, book)

Sequences events

Uses vocabulary to identify events in a routine

Independently completes an activity that requires 3 things be done in sequence

Tells 3 events in chronological order.

Differentiates past and future events

Identifies first and last events

Uses vocabulary that measures time

Sequences events

Uses concepts of morning, afternoon, night, today, tomorrow

Uses concepts of today, yesterday and tomorrow.

Uses measuring units for time

Uses vocabulary that measures time

Uses the terms week, month, year

Uses the terms minute, hour, day

Tells time to the nearest hour

Uses measuring units for time

Reads numerals 1-12 on a clock face.

Uses the clock as a tool to measure time.

Explains that clocks are used to measure time.

Identifies the hour hand on a clock.

Identifies the minute hand on a clock.

Identifies the second hand on the clock.

Matches clock face to its digital representation.

Reads and writes digital clock times.

Uses AM/PM.

Tells time to the fraction of the hour

Tells time to the nearest hour

Tells time to the nearest half hour using a clock with hands.

Tells time to the quarter hour using a clock face.

Tells time to the nearest 5-minute interval.

Relates the number of minutes to an hour.

Relates the number of hours to a day.

Tells time to the minute

Tells time to the fraction of the hour

Identifies the minute hand on a clock.

Relates the number of seconds to a minute.

Tells time to the nearest 5-minute interval.

Tells time to the nearest minute.

Standard 2: Geometry and Measurement
Size, length, capacity, weight, temperature

Explores measurement attributes

Pours substances in and out of containers

Responds to hot and cold

Responds to "all done" "want more"

Responds to "one more..." (e.g. time, book)

Distinguishes between big and little, hot and cold

Explores measurement attributes

Distinguishes between big and little

Makes choices based on size

Communicates feelings of hot and cold

Communicates size of things relative to self

Uses descriptive word or gesture to express amount or size

Differentiates gradients of size and weight

Distinguishes between big and little, hot and cold

Orders 3 objects by size

Assembles a set of nesting objects
Recognizes which object is lighter/heavier
Recognizes which object is warmer/cooler
Recognizes which object can hold more
Recognizes which object is shorter, longer, or taller

Uses common measuring tools in correct context

Differentiates gradients of size and weight
Uses a cup to act out a measurement of capacity
Uses a ruler to act out a measurement of length or height
Uses a scale to act out a measurement of weight
Uses a thermometer to act out a measurement of temperature

Makes direct measurement comparisons

Uses common measuring tools in correct context
Makes direct comparisons of length
Makes direct comparisons of capacity
Makes direct comparisons of weight.
Makes direct comparisons of temperature

Measures units of length, capacity, weight and temperature

Makes direct measurement comparisons
Compares and orders objects according to weight.
Measures the length of objects by repeating a non-standard unit or a standard unit.
Uses different units to measure the length of the same object and predicts whether the measure will be greater or smaller when a different unit is used.
Estimates weight and uses a given object to measure the weight of other objects.
Estimates and measures weight using pounds and kilograms.
Estimates/finds the volume of objects by counting the number of cubes that would fill them.
Estimates and measures capacity using cups.
Estimates and measures capacity using pints.
Uses fractional marks on measuring cups.
Estimates and measures capacity using quarts, gallons, and liters.
Measures and mixes dry and liquid materials in prescribed amounts.
Estimates and measures length to the nearest inch
Estimates and measures length to the nearest foot.
Measures and estimates length to the nearest yard.
Measures line segments to the nearest half-inch.
Measures length to the nearest quarter inch.
Measures length to the nearest eighth inch.
Measures and estimates length to the nearest centimeter
Estimates and measures length to the nearest meter.
Measures length to the nearest millimeter.

Selects appropriate units to estimate and measure

Measures units of length, capacity, weight and temperature
Uses the conventional language for units of measurement in the correct context.
Select and use appropriate measuring units.
Selects and applies appropriate standard units and tools to measure length, area, volume, weight, time, temperature, and the size of angles.

Standard 2: Geometry and Measurement

Sorting, classifying and constructing

Explores attributes (e.g. shape, size, color)

Attends to visual, auditory, tactile patterns

Shows interest in something out of place (e.g. finding a small object on the carpet)

Uses a shape toy to explore basic shapes

Puts smaller objects into larger holes, slots or depressions

Matches same attributes

Explores attributes (e.g. shape, size, color)

Matches squares, circles

Matches rectangles, triangles

Identifies when objects are the same.

Matches opposites

Matches same attributes

Puts together pairs of pictures of opposites

Names the opposite of a given quality

Identifies objects that do not belong to a particular group

Sorts and patterns by one attribute

Matches opposites

Names groups of objects according to the common attribute

Identifies geometric shapes (e.g. circles, triangles, squares, rectangles, cubes)

Puts objects into groups with the similar attribute

Identify and sort common words in basic categories

Copies simple patterns with numbers and shapes

Identifies patterns.

Predicts what comes next when shown a simple AB pattern of objects

Compares and sorts by roundness

Compares and sorts by number of corners

Sorts and patterns by more than one attribute

Sorts and patterns by one attribute

Groups familiar items by classification and function

Gives reasons for sorting of objects

Identifies categories of objects in pictures

Sorts and classifies objects by size and shape

Compare and sort common objects by position, roundness and number of vertices

Creates patterns of more than one attribute

Reproduces patterns of sounds and movement

Describes attributes of common shapes

Sorts and patterns by more than one attribute

Identifies attributes of objects.

Identifies and describes circles

Identifies and describes triangles

Identifies and describes squares

Identifies and describes rectangles

Identifies shapes as being two- or three-dimensional.

Identifies and describes cubes.

Identifies and describes quadrilaterals.

Identifies and draws parallel and perpendicular lines

Describes attributes of common shapes

Uses points, lines and line segments in describing two-dimensional shapes.

Identifies and describes rays.

Identifies and describes parallel lines.

Identifies and describes perpendicular lines.

Identifies and draws parallel and perpendicular lines

Draws or models shapes
Constructs squares, rectangles, and triangles with appropriate materials.
Draws parallelograms, rhombuses and trapezoids.
Creates polygons.

Standard 3: Algebra and Functions
Locations and coordinate grids

Demonstrates an awareness of location of objects
Tracks movement
Responds to objects in the environment
Looks or feels for an object or sound that is hidden
Puts things in and out of other things
Identifies one body part

Identifies location
Demonstrates an awareness of location of objects
Identifies where he/she is currently located
Locates a hidden object or sound
Responds to "here" and "there"
Identifies the location of 3 body parts

Follows directions involving location
Identifies location
Follows instructions to put an object in a different place (room, space)
Follows instructions to place an object in, out, on or off of something
Follows directions involving 5 body parts

Communicates with location words
Follows directions involving location
Uses "beside" or "next to"
Answers "where is..." questions
Asks "where is..." questions

Uses prepositions to describe location
Communicates with location words
Uses prepositions - inside, outside, between, above, below
Compares and sorts objects by position

Uses ordinal numbers to describe order (e.g. 3rd)
Uses prepositions to describe location
Identifies objects by ordinal position.
Matches the ordinal number names (1st, 2nd, 3rd, etc.) with an ordered set of up to ten items.
Matches ordinal number name (first, second, third, etc.) with an ordered set containing up to 100 elements.

Identifies location using a number line
Uses ordinal numbers to describe order (e.g. 3rd)
Compares numbers on a number line
Given a 2-digit number and using the model of a number line, identifies the nearest ten.
Uses number lines to describe number relationships.
Plots and labels whole numbers on a number line up to 10.
Plots and labels whole numbers on a number line up to 100.
Estimates positions on a number line.

Identifies location using two coordinates
Identifies location using a number line
Records and organizes information using pictures.
Represents data using pictures and picture graphs.

Collects, records and represents numerical data in systematic ways.
Collects data to make a picture or bar graph.
Creates a bar graph, given a set of data.
Constructs tables and graphs to show how values of one quantity are related to values of another.
Uses latitude and longitude to describe the location of places on the globe.